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File # 997434

NPIC/TDS/D-1091-67
24 October 1967

MEMORANDUM FOR THE RECORD

25X1A SUBJECT: [redacted] Chip Comparator Progress Report

1. During the period 2-4 August [redacted] personnel installed 25X1A
a temporary field modification to the 405 AM chip comparator to keep it in an operational status until such time as it can be sent to the factory for permanent modifications. On the 17th, 18th, and 23rd of August the 25X1A
[redacted] technician returned to make minor adjustments to the machine. Since the 23rd of August, no maintenance adjustments of any sort have been made to the instrument except for water replenishment.

2. TDS will observe the operational reliability of the comparators without making any maintenance adjustments until the reliability drops below acceptable limits in order to determine mean time between failure. As soon as sufficient data is available, a routine preventative maintenance schedule will be set up to keep all of the comparators in peak operating condition.

3. At present, two 405B comparators are at [redacted] for the 25X1A
modifications considered necessary to make them operationally reliable. It was originally estimated that these two machines would be returned to the NPIC by 1 October, but [redacted] requested additional time 25X1A
because of difficulties with delivery of required optical subcomponents and additional design analysis work they were performing on the Interforemeters. It is now anticipated that the two 405B's will be returned by the middle of November, at which time two more machines will be returned for modifications, if the funding is available.

4. Based on the performance record of the 405AM for the past two months, indications are that the fundamental operational reliability problems with the chip comparators have been resolved, but that additional funding will be required. A cost analysis and work statement has been 25X1A
received from [redacted] and is being forwarded to the respective components under separate memo for action.

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5. An additional consideration concerning the operational use of the chip comparators, not previously covered, is the availability of computer time and software. Since four out of the six chip comparators are exclusively on-line, the operational availability of the chip comparators must therefore take into consideration the data processing as an essential element of consideration. It is my understanding from talking to IAS, TDS, and DIA personnel that that the data processing problem is of extreme concern to them. Also affecting the operational acceptability of the chip comparators are the building facility requirements and training programs. Since the chip comparators are highly sophisticated pieces of equipment, they impose special building facility and training requirements on the Center.

6. In summary, TDS feels that the solution for the basic reliability and maintainability of the chip comparators has been resolved from the technical viewpoint, but that the operational acceptability is dependent upon additional considerations beyond its control; namely, the required additional funding, the data processing capability, training, and building facility maintenance.

25X1A

Support Systems Branch, DS/TDS

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25X1A 1 - DIA (Attn:)
1 - NPIC/TDS/EPS
1 - NPIC/TDS/DS
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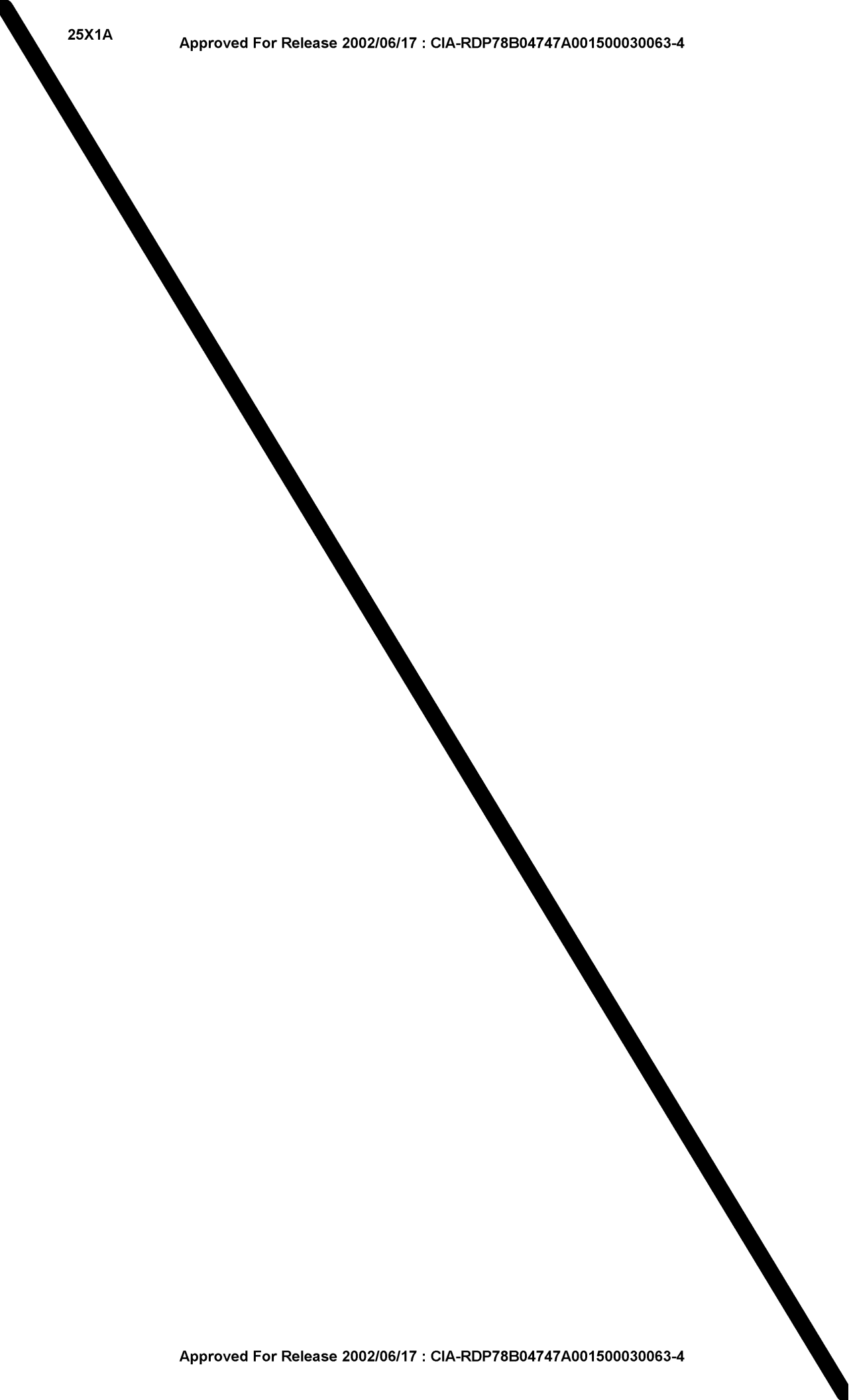

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Questions on Chip Comparators

1. How much money have we invested in development as well as purchases of these comparators?

2. Why did almost two years elapse before we formally told [redacted] in July 1966 of our concern? 25X1A

3. Who in the Center is responsible for checking with those components who have purchased equipment in order to state whether or not the equipment operates satisfactorily?

4. Do any of the comparators work at all?

5. Are the comparators useful for [redacted] and other current and projected take? If there is doubt on this score, why do we continue to mess with this? Maybe we should just take our loss. 25X1A

6. On what basis and with what rationale did we proceed to purchase in mid-64? Who certified acceptability of the prototype and what kinds of tests were used on the prototype?

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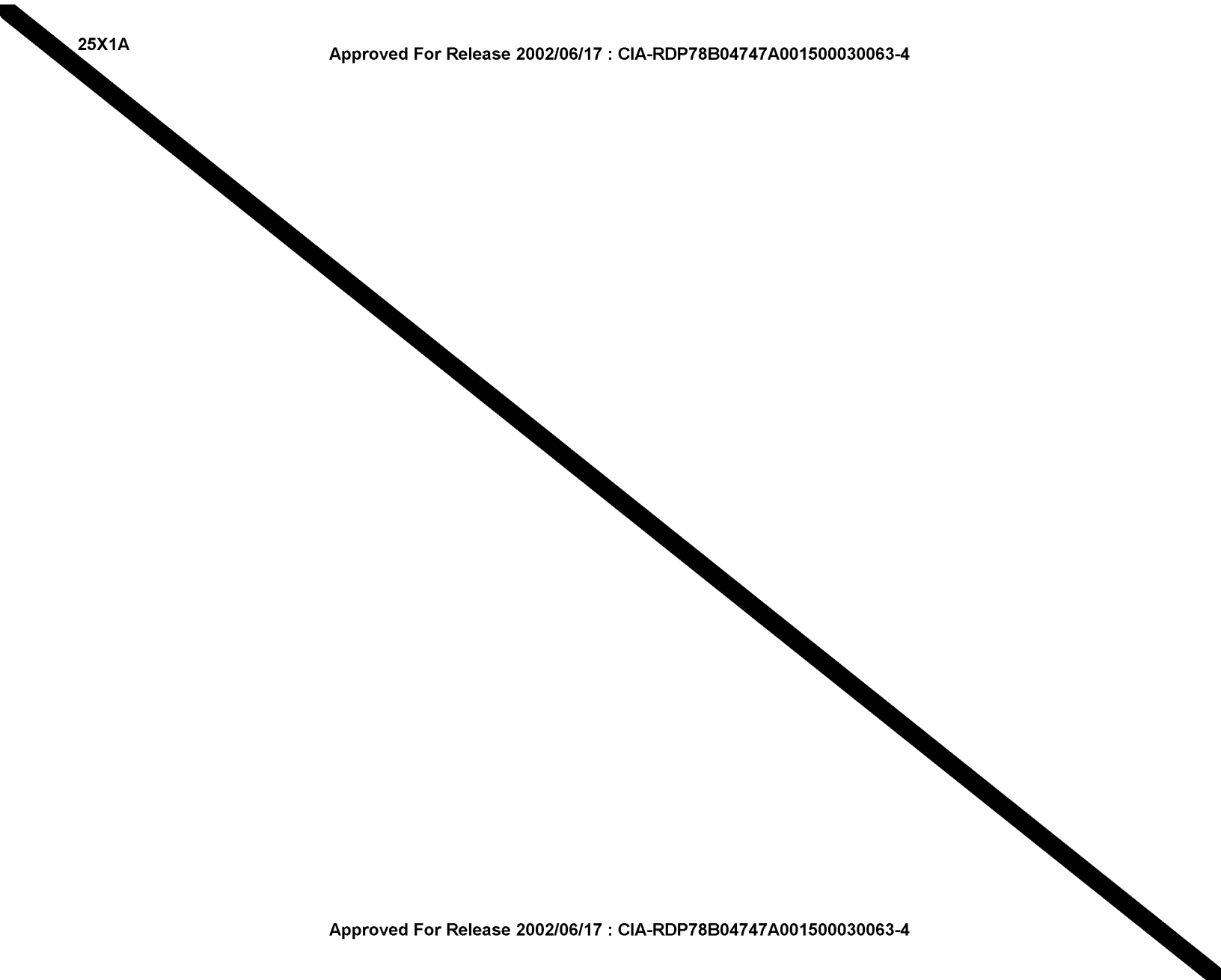

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